

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A laser scanning device, in particular for distance determination having apparatus for scanning a monitored zone outside the scanning device with a pulsed light beam comprising

a transmission unit (10), which has a pulsed laser for the transmission of transmitting a light beam into a the zone to be monitored;

a light deflection unit (16) to deflect the light beam (12) transmitted by the pulsed laser into the zone to be monitored;

a reception unit (10) for the reception of light pulses which are reflected by an object located in the zone to be monitored; and

a front screen (20) which transmits the light beam (12) and which separates the transmission unit, the reception unit and the light deflection unit (10, 16) from the surroundings outside of the laser scanning apparatus; and

with at least one optical element (22) being provided which splits off a part beam (24) from the transmitted light beam and deflects the part beam (24) to a photo-detector (10, 28) for a measurement of the transmission of the front screen (20).

Claim 2 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that the optical element (22) is coupled to the front screen (20).

Claim 3 (currently amended): A laser scanning apparatus in accordance with claim 2, characterized in that the optical element (22) is a separate component which can be fastened to the front screen (20), in particular to its at an inner side (26) thereof.

Claim 4 (currently amended): A laser scanning apparatus in accordance with claim 2, characterized in that the optical element (22) is integrated into the front screen (20).

Claim 5 (currently amended): A laser scanning apparatus in accordance with claim 2, characterized in that the optical element (22) is a diffractive optical element (20).

Claim 6 (currently amended): A laser scanning apparatus in accordance with claim 2, characterized in that the optical element (22) is an optical grid (20).

Claim 7 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that the at least one photo-detector (28) for the measurement of the intensity of the received part beam (24) is disposed on the side of the front screen (20) remote from the light deflection unit (16).

Claim 8 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that the at least one photo-detector (28) for the measurement of the intensity of the received part beam (24) and the light deflection unit (16) are disposed on the same side of the front screen (20), with the front screen (20) being formed such that the part beam (24) passes through the front screen (20) at least twice.

Claim 9 (currently amended): A laser scanning apparatus in accordance with claim 7, characterized in that the photo-detector (28) is disposed above or beneath the front screen (20).

Claim 10 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that at least one reflector element (38) is disposed on the side of the front screen (20) remote from the light deflection unit (16).

Claim 11 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that at least one reflector element (38) and the light deflection unit (16) are disposed on the same side of the front screen (20), with the front screen (20) being designed such that the part beam (24) passes through the front screen (20) at least twice.

Claim 12 (currently amended): A laser scanning apparatus in accordance with claim 10, characterized in that at least a part (40) of the part beam (24) can be reflected by the

reflector element (38) via the optical element (22) and via the light deflection unit (16) into the reception unit (10).

Claim 13 (currently amended): A laser scanning apparatus in accordance with claim 11, characterized in that at least a part (40) of the part beam (24) can be reflected by the reflector element (38) via the optical element (22) and via the light deflection unit (16) into the reception unit (10).

Claim 14 (currently amended): A laser scanning apparatus in accordance with claim 10, characterized in that the reflector element (38) is formed as a reference target.

Claim 15 (currently amended): A laser scanning apparatus in accordance with claim 11, characterized in that the reflector element (38) is formed as a reference target.

Claim 16 (currently amended): A laser scanning apparatus in accordance with claim 10, characterized in that the reflector element (38) is disposed above or beneath the front screen (20).

Claim 17 (currently amended): A laser scanning apparatus in accordance with claim 11, characterized in that the reflector element (38) is disposed above or beneath the front screen (20).

Claim 18 (currently amended): A laser scanning apparatus in accordance with claim 10, characterized in that the reflector element (38) is formed by a retro-reflecting foil.

Claim 19 (currently amended): A laser scanning apparatus in accordance with claim 11, characterized in that the reflector element (38) is formed by a retro-reflecting foil.

Claim 20 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that the light deflection unit (16) is made such that a reference beam (32) can be split off from the transmitted light beam (12) and can be deflected in the direction of a reference target (34).

Claim 21 (currently amended): A laser scanning apparatus in accordance with claim 20, characterized in that the reference beam (32) can be transmitted through the light deflection unit (16).

Claim 22 (currently amended): A laser scanning apparatus in accordance with claim 20, characterized in that the reference target (34) is made in a reflecting manner and the light deflection unit (16) is made in a light transmitting manner such that the reference beam can be coupled via the light deflection unit (16) into the reception unit (10) after reflection at the reference target (34).

Claim 23 (currently amended): A laser scanning apparatus in accordance with claim 21, characterized in that the reference target (34) is made in a reflecting manner and the light deflection unit (16) is made in a light transmitting manner such that the reference beam can be coupled via the light deflection unit (16) into the reception unit (10) after reflection at the reference target (34).

Claim 24 (currently amended): A laser scanning apparatus in accordance with claim 20, characterized in that the reference target (34) is formed by a retro-reflecting foil.

Claim 25 (currently amended): A laser scanning apparatus in accordance with claim 21, characterized in that the reference target (34) is formed by a retro-reflecting foil.

Claim 26 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that the light deflection unit (16) includes a semi-permeable planar mirror, in particular a semi-permeable planar mirror.

Claim 27 (currently amended): A laser scanning apparatus in accordance with claim 1, characterized in that the light deflection unit (16) is rotatable about an axis, in particular a vertical axis, in order to monitor a an angular range of 360° with the transmitted light beam (12), in particular in a horizontal plane.

Claim 28 (currently amended): A laser scanning apparatus in accordance with claim 20, characterized in that the reference beam (32) can be controlled by an operative

switching arrangement such that it is only incident on the reference target (34) at ~~pre-determined~~ predetermined angular positions of the light deflection unit (16).

Claim 29 (currently amended): A laser scanning apparatus in accordance with claim 21, characterized in that the reference beam (32) can be controlled by an operative switching arrangement such that it is only incident on the reference target (34) at ~~pre-determined~~ predetermined angular positions of the light deflection unit (16).

Claim 30 (currently amended): A laser scanning apparatus in accordance with claim 28, characterized in that the operative switching arrangement is an optical arrangement rotating with the light deflection unit (16).

Claim 31 (currently amended): A laser scanning apparatus in accordance with claim 29, characterized in that the operative switching arrangement is an optical arrangement rotating with the light deflection unit (16).

Claim 32 (currently amended): A laser scanning apparatus in accordance with claim 28, characterized in that the operative switching arrangement is a fixed diaphragm and/or shutter arrangement, ~~in particular~~ synchronized with the light deflection unit (16).

Claim 33 (currently amended): A laser scanning apparatus in accordance with claim 29, characterized in that the operative switching arrangement is a fixed diaphragm and/or shutter arrangement, ~~in particular~~ synchronized with the light deflection unit (16).

Claim 34 (original): A laser scanning apparatus in accordance with claim 32, characterized in that the shutter arrangement is formed by polarization filters or by grid/diaphragm structures rotatable with respect to one another.

Claim 35 (original): A laser scanning apparatus in accordance with claim 33, characterized in that the shutter arrangement is formed by polarization filters or by grid/diaphragm structures rotatable with respect to one another.

Claim 36 (currently amended): A method for the monitoring of a front screen (20) of a laser scanning apparatus, ~~in particular in accordance with any one of the preceding~~

claims, in which for scanning a monitored zone outside the scanning device with a pulsed light beam having

a transmission unit, which has a pulsed laser for transmitting a light beam into the zone;

a light deflection unit to deflect the light beam transmitted by the pulsed laser into the zone to be monitored;

a reception unit for the reception of light pulses which are reflected by an object located in the zone to be monitored;

a front screen which transmits the light beam and which separates the transmission unit, the reception unit and the light deflection unit from the outside of the laser scanning apparatus; and

at least one optical element which splits off a part beam from the transmitted light beam and deflects the part beam to a photo-detector for a measurement of the transmission of the front screen.

the method comprising splitting off a part beam (24) is split off from a the light beam (12) transmitted by a transmission unit (10), in particular comprising a the pulsed laser, by an with the optical element (22), in particular an coupling the optical element coupled to a the front screen (20), and is deflected deflecting the part beam through the front screen (20) to determine the transmission of the front screen (20).

Claim 37 (currently amended): A method in accordance with claim 36, characterized in that the intensity of the part beam (24) transmitted through the front screen (20) is measured by means of at least one photo-detector (28).

Claim 38 (currently amended): A method in accordance with claim 36, characterized in that at least a part (40) of the part beam (24) transmitted through the front screen (20) is reflected back through the front screen (20) and the optical element (22) by means of a reflector element (38) onto a reception unit (10) in which the intensity of the reflected part beam (40) is measured.

Claim 39 (currently amended): A method in accordance with claim 36, characterized in that a reference beam (32) is split off from the transmitted light beam (12) by a light deflection unit (16) and is deflected to a reference target (34) which reflects the reference beam (32) at least partly, with the light deflection unit (16) deflecting the reflected reference beam (36) in the direction of a reception unit (40) in which the intensity of the reflected reference beam (36) is determined.